



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/586,620

07/19/2006

Kei Yoneda

056937-0299

8199

53080

7590

05/27/2009

MCDERMOTT WILL & EMERY LLP
600 13TH STREET, NW
WASHINGTON, DC 20005-3096

EXAMINER

PHAN, THAI Q

ART UNIT

PAPER NUMBER

2128

MAIL DATE

DELIVERY MODE

05/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/586,620 | Applicant(s) YONEDA ET AL. | |
| | Examiner Thai Phan | Art Unit 2128 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 15-18, 21-24, 30, 32 and 34 is/are rejected.
- 7) ☒ Claim(s) 4-14, 19, 20, 25-29, 31, 33 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to patent application S/N: 10/586,620, filed on July 19, 2006. Claims 1- 35 are pending in the Action.

Information Disclosure Statement

The Information Disclosure Statement filed on July 19, 2006 was being considered by the examiner.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on January 20, 2004. It is noted, however, that applicant has not filed a certified copy of the Japan application as required by 35 U.S.C. 119(b).

Claim Objections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 6, 7, 12 and 24 are objected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The cited "collating the instruction and the reference data" in the claims are unclear.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 15-18, 21-24, 30, 32, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Liang, Sheng, US patent no. 7,120,572.

As per claim 1, Liang anticipates a verification apparatus comprising:

a circuit data unit including at least a processor;

a simulation device; an expectation value generating device;

a comparing device;

an extracting device; and an execution control device, wherein the simulation device executes simulation of an instruction executable by the processor in the circuit data unit to thereby generate a simulation result, the expectation value generating device generates an expectation value when the instruction is executed, the comparing device compares the simulation result to the expectation value, the extracting device extracts an information referenced when the expectation value generating device generates the expectation value or the generated expectation value, and the execution control device judges whether or not the instruction satisfies data restriction condition

Art Unit: 2128

based on the information extracted by the extracting device (col. 6, lines 58-65, col. 7, lines 30-41, col. 8, line 62 to col. 9, line 10), and

controls the execution of the instruction in the simulation device and the expectation value generating device based on a result of the judgment (col. 7, lines 30-42, col. 10, lines 6-20, col. 12, lines 25-58).

As per claim 2, Liang anticipated the verification apparatus as claimed in claim 1, wherein the execution control device observes a value of a register in which the information extracted (derived) by the extracting device is stored to thereby judge whether or not the instruction satisfies the data restriction condition (col. 8, line 62 to col. 9, line 10, col. 17, lines 23-34).

As per claim 3, the verification apparatus as claimed in claim 1, wherein the execution control device halts the execution of the instruction in the simulation device and the expectation value generating device based on the judgment result (col. 18, line 39 to col.19, line 45).

As per claims 15-18, the claims directed to processing steps of the apparatus claims 1-3 above and Liang also anticipated the method of operation of the devices as in the method claims. Claims 15-18 are also rejected under the same rationales as set forth.

As per claim 21, Liang anticipated the instruction emulation with expected value as claimed (Col. 17, lines 23-34, col.. 20, lines 6-34).

Art Unit: 2128

As per claims 22-24, 30, 32, and 34, Liang anticipated the limitations in the claims to check expectation data values, instructions shifting or backjump as in col. 20, line 1 to col. 21, line 30) ,

Conclusion

1. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Phan whose telephone number is 571-272-3783. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

2. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2128

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 22, 2007

/Thai Phan/
Primary Examiner, Art Unit 2128